Name:

at1110paper_practice_test (v7)

1. Expand the following expression into standard form.

$$(3x + 8)(3x - 8)$$

$9x^2 - 24x + 24x - 64$

$9x^2 - 64$

2. Solve the equation.

$$(9x + 4)(7x + 8) = 0$$

$x = \frac{-4}{9}$ $x = \frac{-8}{7}$

3. Factor the expression.

$$x^2 + 5x - 14$$

$(x - 2)(x + 7)$

4. Solve the equation with factoring by grouping.

$$8x^2 + 6x + 20x + 15 = 0$$

$(2x + 5)(4x + 3) = 0$

$x = \frac{-5}{2}$ $x = \frac{-3}{4}$

5. Expand the following expression into standard form.

$$(3x + 4)(5x + 9)$$

$15x^2 + 27x + 20x + 36$

$15x^2 + 47x + 36$

6. Factor the expression.

$$36x^2 - 49$$

$(6x + 7)(6x - 7)$

7. Expand the following expression into standard form.

$$(5x - 2)^2$$

$25x^2 - 10x - 10x + 4$

$25x^2 - 20x + 4$

8. Solve the equation.

$$10x^2 - 37x - 58 \;=\; 3x^2 + 4x - 2$$

$7x^2 - 41x - 56 = 0$

$(7x + 8)(x - 7) = 0$

$x = \dfrac{-8}{7} \qquad x = 7$